#### **RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/694, 207Source: 1FWODate Processed by STIC: 03/09/2006

# ENTERED



**IFWO** 

RAW SEQUENCE LISTING DATE: 03/09/2006
PATENT APPLICATION: US/10/694,207 TIME: 11:07:51

Input Set : N:\Crf3\RULE60\10694207.raw.txt
Output Set: N:\CRF4\03082006\J694207.raw

1 <110> APPLICANT: Kandimalla, Ekambar R. Zhao, Qiuyan 2 Yu, Dong 3 Agrawal, Sudhir 5 <120> TITLE OF INVENTION: Modulation of Immunostimulatory Activity of Immunostimulatory Modified oligodeoxynucleotide phosphorothioate Analogs by Positional Chemical Changes 9 <130> FILE REFERENCE: HYZ-479CP (47508.577) The state of the s 10 <140> CURRENT APPLICATION NUMBER: US/10/694,207 11 <141> CURRENT FILING DATE: 2003-10-27 12 <150> PRIOR APPLICATION NUMBER: US/09/965,116 13 <151> PRIOR FILING DATE: 2001-09-26 14 <150> PRIOR APPLICATION NUMBER: US 09/712,898 15 <151> PRIOR FILING DATE: 2000-11-15 16 <150> PRIOR APPLICATION NUMBER: US 60/235,452 17 <151> PRIOR FILING DATE: 2000-09-26 18 <150> PRIOR APPLICATION NUMBER: US 60/235,453 19 <151> PRIOR FILING DATE: 2000-09-26 20 <160> NUMBER OF SEQ ID NOS: 112 21 <170> SOFTWARE: FastSEQ for Windows Version 4.0 23 <210> SEQ ID NO: 1 24 <211> LENGTH: 18 25 <212> TYPE: DNA 26 <213> ORGANISM: Artificial Sequence 27 <220> FEATURE: 28 <223> OTHER INFORMATION: synthesis of CpG-PS-oligos containing cytosine analogs 29 <400> SEQUENCE: 1 ctatctgacg ttctctgt 18 32 <210> SEQ ID NO: 2 33 <211> LENGTH: 18 34 <212> TYPE: DNA 35 <213> ORGANISM: Artificial Sequence 36 <220> FEATURE: 37 <223> OTHER INFORMATION: synthesis of CpG-PS-oligos containing cytosine analogs 38 <220> FEATURE: 39 <221> NAME/KEY: modified\_base 40 <222> LOCATION: 9 41 <223> OTHER INFORMATION: c = 5-hydroxydeoxycytidine 42 <400> SEQUENCE: 2 43 ctatctgacg ttctctgt 18 45 <210> SEQ ID NO: 3 46 <211> LENGTH: 18

Input Set : N:\Crf3\RULE60\10694207.raw.txt
Output Set: N:\CRF4\03082006\J694207.raw

47 <212> TYPE: DNA 48 <213> ORGANISM: Artificial Sequence 49 <220> FEATURE: 50 <223> OTHER INFORMATION: synthesis of CpG-PS-oligos containing cytosine analogs 51 <220> FEATURE: 52 <221> NAME/KEY: modified\_base 53 <222> LOCATION: 10 54 <223> OTHER INFORMATION: c = 5-hydroxydeoxycytidine 55 <400> SEQUENCE: 3 ctatctgacc ttctctgt 18 58 <210> SEQ ID NO: 4 59 <211> LENGTH: 18: 60 <212> TYPE: DNA 61 <213> ORGANISM: Artificial Sequence 62 <220> FEATURE: 63 <223> OTHER INFORMATION: synthesis of CpG-PS-oligos containing cytosine analogs 64 <220> FEATURE: 65 <221> NAME/KEY: modified base 66 <222> LOCATION: 9 67 <223> OTHER INFORMATION: c = N4-ethyldeoxycytidine 68 <400> SEQUENCE: 4 ctatctgacg ttctctgt 18 71 <210> SEQ ID NO: 5 72 <211> LENGTH: 18 73 <212> TYPE: DNA 74 <213> ORGANISM: Artificial Sequence 75 <220> FEATURE: 76 <223> OTHER INFORMATION: synthesis of CpG-PS-oligos containing cytosine analogs 77 <220> FEATURE: 78 <221> NAME/KEY: modified base 79 <222> LOCATION: 10 80 <223> OTHER INFORMATION: c = N4-ethyldeoxycytidine 81 <400> SEQUENCE: 5 82 ctatctgacc ttctctgt 18 84 <210> SEQ ID NO: 6 85 <211> LENGTH: 16 86 <212> TYPE: DNA 87 <213> ORGANISM: Artificial Sequence 88 <220> FEATURE: 89 <223> OTHER INFORMATION: synthesis of end-blocked CpG-PS modified oligodeoxynucleotide 90 phosphorothioate 92 <400> SEQUENCE: 6 aaggtcgagc gttctc 16 95 <210> SEO ID NO: 7 96 <211> LENGTH: 18 97 <212> TYPE: DNA 98 <213> ORGANISM: Artificial Sequence

99 <220> FEATURE:

Input Set : N:\Crf3\RULE60\10694207.raw.txt
Output Set: N:\CRF4\03082006\J694207.raw

100 <223> OTHER INFORMATION: synthesis of end-blocked CpG-PS modified 101 oligodeoxynucleotide 102 phosphorothioate 103 <400> SEQUENCE: 7 104 atggcgcacg ctgggaga 18 106 <210> SEQ ID NO: 8 107 <211> LENGTH: 18 108 <212> TYPE: DNA 109 <213> ORGANISM: Artificial Sequence 110 <220> FEATURE: 111 <223> OTHER INFORMATION: oligodeoxynucleotide phosphorothioate 112 <400> SEQUENCE: 8 cctactagcg ttctcatc 18 115 <210> SEQ ID NO: 9 116 <211> LENGTH: 18 117 <212> TYPE: DNA 118 <213> ORGANISM: Artificial Sequence 119 <220> FEATURE: 120 <223> OTHER INFORMATION: oligodeoxynucleotide phosphorothioate 121 <220> FEATURE: 122 <221> NAME/KEY: modified base 123 <222> LOCATION: 10 124 <223> OTHER INFORMATION: g = 1',2'-Dideoxyribose 125 <400> SEQUENCE: 9 cctactagcg ttctcatc 18 128 <210> SEQ ID NO: 10 129 <211> LENGTH: 18 130 <212> TYPE: DNA 131 <213> ORGANISM: Artificial Sequence 132 <220> FEATURE: 133 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 134 <220> FEATURE: 135 <221> NAME/KEY: modified base 136 <222> LOCATION: 8 137 <223> OTHER INFORMATION: g = 1', 2'-Dideoxyribose 138 <400> SEQUENCE: 10 cctactagcq ttctcatc 18 141 <210> SEQ ID NO: 11 142 <211> LENGTH: 18 143 <212> TYPE: DNA 144 <213> ORGANISM: Artificial Sequence 145 <220> FEATURE: 146 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 147 <220> FEATURE: 148 <221> NAME/KEY: modified base 149 <222> LOCATION: 7 150 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose 151 <400> SEQUENCE: 11 cctactagcg ttctcatc 18

Input Set : N:\Crf3\RULE60\10694207.raw.txt
Output Set: N:\CRF4\03082006\J694207.raw

154 <210> SEQ ID NO: 12 155 <211> LENGTH: 18 156 <212> TYPE: DNA 157 <213> ORGANISM: Artificial Sequence 158 <220> FEATURE: 159 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 160 <220> FEATURE: 161 <221> NAME/KEY: modified base 162 <222> LOCATION: 6 163 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose 164 <400> SEQUENCE: 12 cctactagcg ttctcatc 18 167 <210> SEQ ID NO: 13 168 <211> LENGTH: 18 169 <212> TYPE: DNA 170 <213> ORGANISM: Artificial Sequence 171 <220> FEATURE: 172 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 173 <220> FEATURE: 174 <221> NAME/KEY: modified base 175 <222> LOCATION: 5 176 <223> OTHER INFORMATION: c = 1',2'-Dideoxyribose 177 <400> SEQUENCE: 13 cctactagcg ttctcatc 180 <210> SEQ ID NO: 14 181 <211> LENGTH: 18 182 <212> TYPE: DNA 183 <213> ORGANISM: Artificial Sequence 184 <220> FEATURE: 185 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 186 <220> FEATURE: 187 <221> NAME/KEY: modified base 188 <222> LOCATION: 4 189 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose 190 <400> SEQUENCE: 14 cctactagcg ttctcatc 191 18 193 <210> SEQ ID NO: 15 194 <211> LENGTH: 18 195 <212> TYPE: DNA 196 <213> ORGANISM: Artificial Sequence 197 <220> FEATURE: 198 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 199 <220> FEATURE: 200 <221> NAME/KEY: modified base 201 <222> LOCATION: 4 202 <223> OTHER INFORMATION: a = 1',2'-Dideoxyribose 203 <400> SEQUENCE: 15 cctactagcc ttctcatc 18 206 <210> SEQ ID NO: 16

Input Set : N:\Crf3\RULE60\10694207.raw.txt
Output Set: N:\CRF4\03082006\J694207.raw

207 <211> LENGTH: 18 208 <212> TYPE: DNA 209 <213> ORGANISM: Artificial Sequence 210 <220> FEATURE: 211 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 212 <220> FEATURE: 213 <221> NAME/KEY: modified base 214 <222> LOCATION: 11 215 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose 216 <400> SEQUENCE: 16 cctactagcg ttctcatc 18 217 219 <210> SEQ ID NO: 17 220 <211> LENGTH: 18 221 <212> TYPE: DNA 222 <213> ORGANISM: Artificial Sequence 223 <220> FEATURE: 224 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 225 <220> FEATURE: 226 <221> NAME/KEY: modified base - 44 the second of the second 227 <222> LOCATION: 12 228 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose 229 <400> SEQUENCE: 17 cctactagcg ttctcatc 18 232 <210> SEQ ID NO: 18 233 <211> LENGTH: 18 234 <212> TYPE: DNA 235 <213> ORGANISM: Artificial Sequence 236 <220> FEATURE: 237 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 238 <220> FEATURE: 239 <221> NAME/KEY: modified\_base 240 <222> LOCATION: 13 241 <223> OTHER INFORMATION: c = 1',2'-Dideoxyribose 242 <400> SEQUENCE: 18 243 cctactagcg ttctcatc 18 245 <210> SEQ ID NO: 19 246 <211> LENGTH: 18 247 <212> TYPE: DNA 248 <213> ORGANISM: Artificial Sequence 249 <220> FEATURE: 250 <223> OTHER INFORMATION: modified oligodeoxynucleotide phosphorothioate 251 <220> FEATURE: 252 <221> NAME/KEY: modified base 253 <222> LOCATION: 14 254 <223> OTHER INFORMATION: t = 1',2'-Dideoxyribose 255 <400> SEQUENCE: 19 256 cctactagcg ttctcatc 18 258 <210> SEQ ID NO: 20

259 <211> LENGTH: 18

VERIFICATION SUMMARY

DATE: 03/09/2006

PATENT APPLICATION: US/10/694,207

TIME: 11:07:52

Input Set : N:\Crf3\RULE60\10694207.raw.txt Output Set: N:\CRF4\03082006\J694207.raw